

FIG. 1

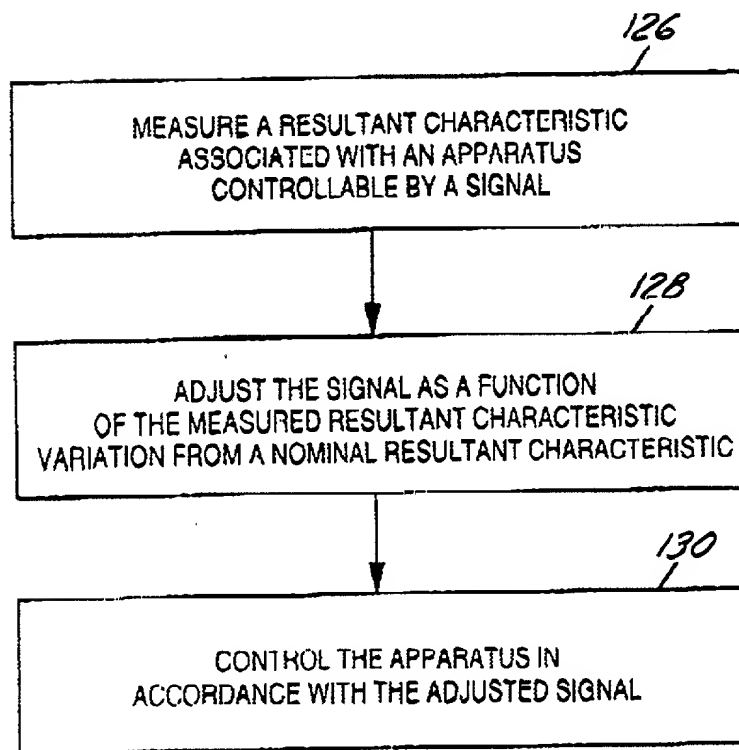
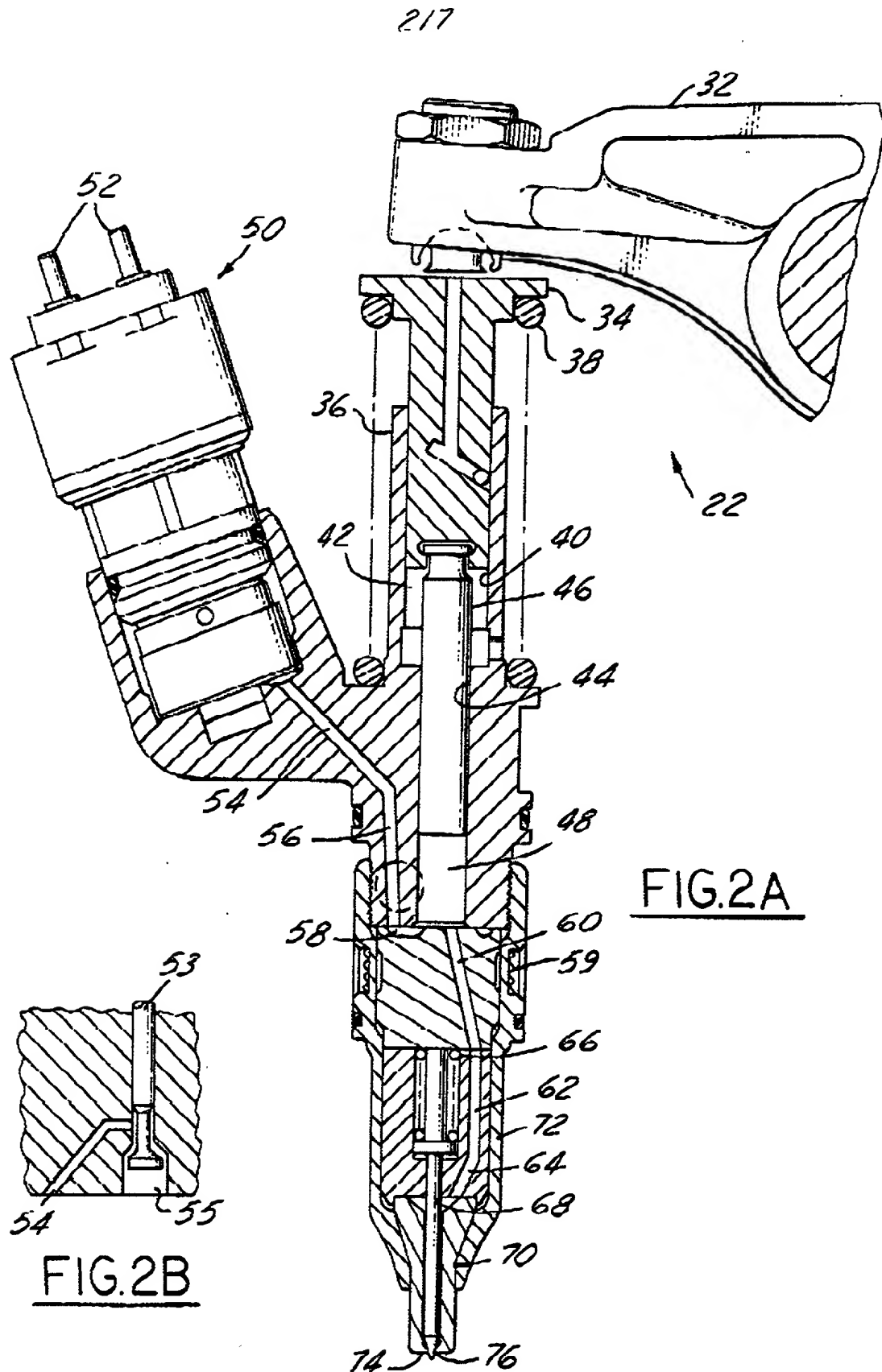
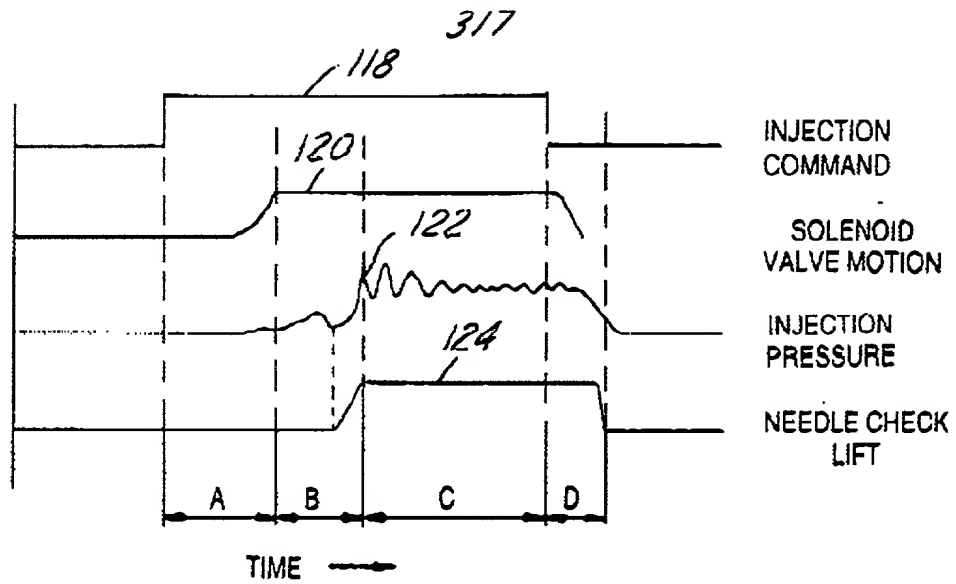
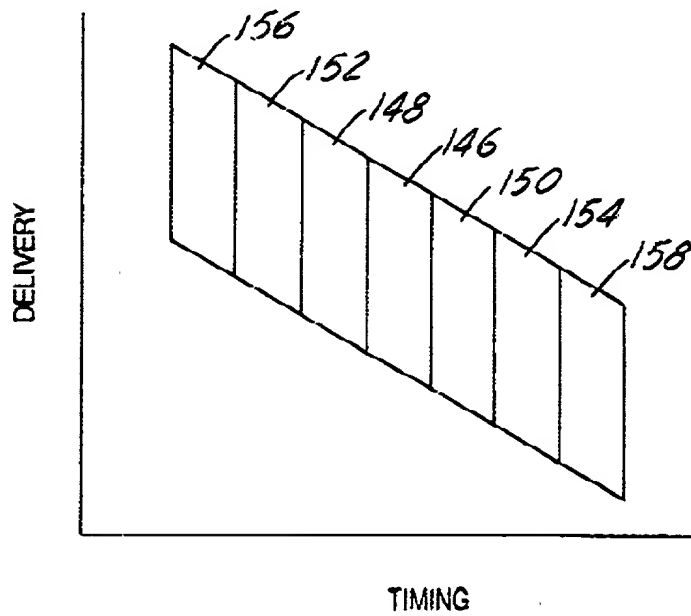
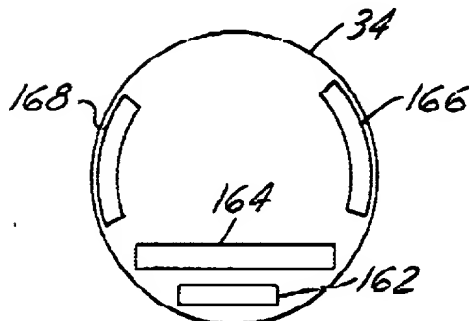


FIG. 4

668250-022250



FIG.3FIG.5FIG.6

66250 022260

417

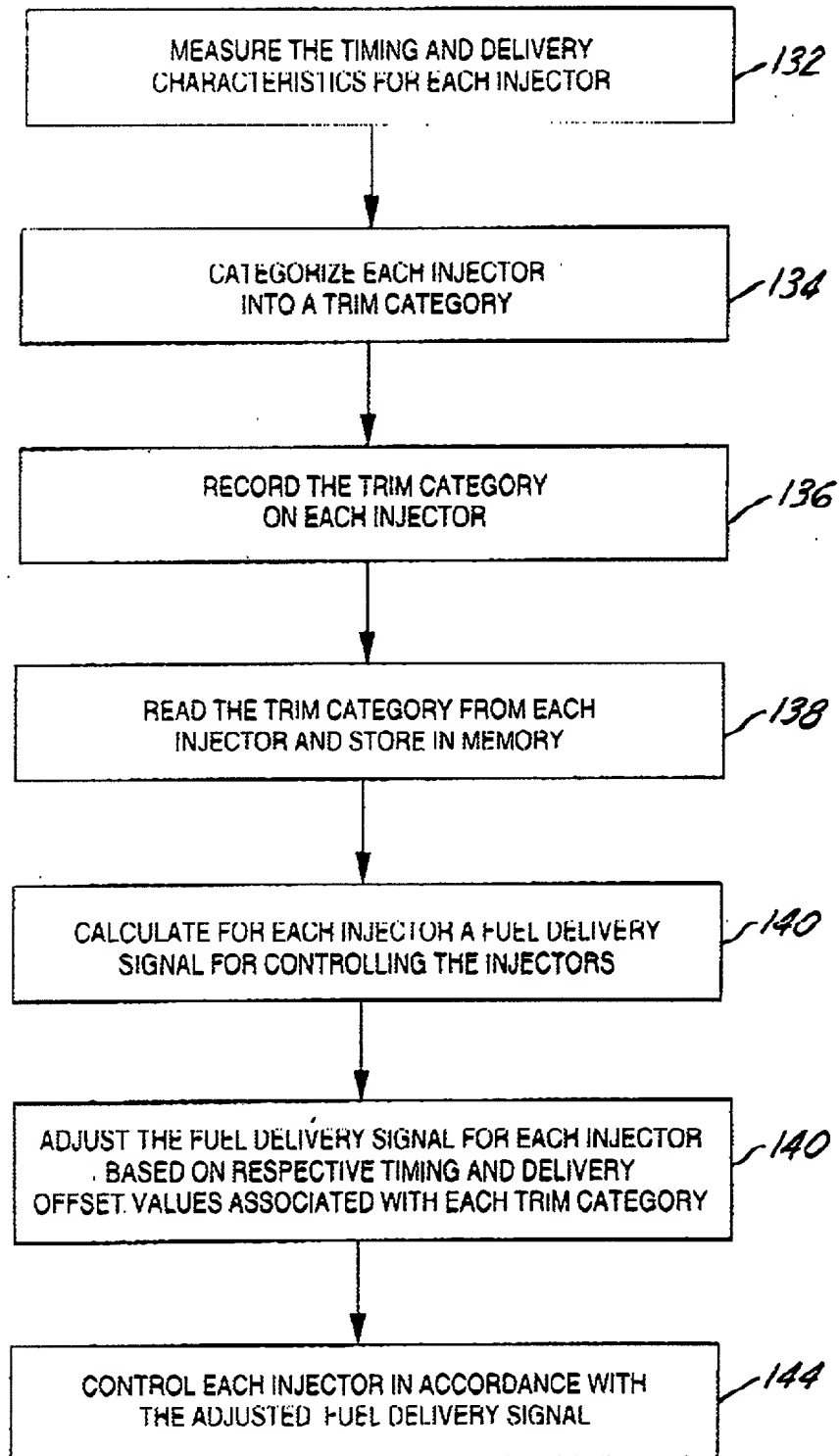
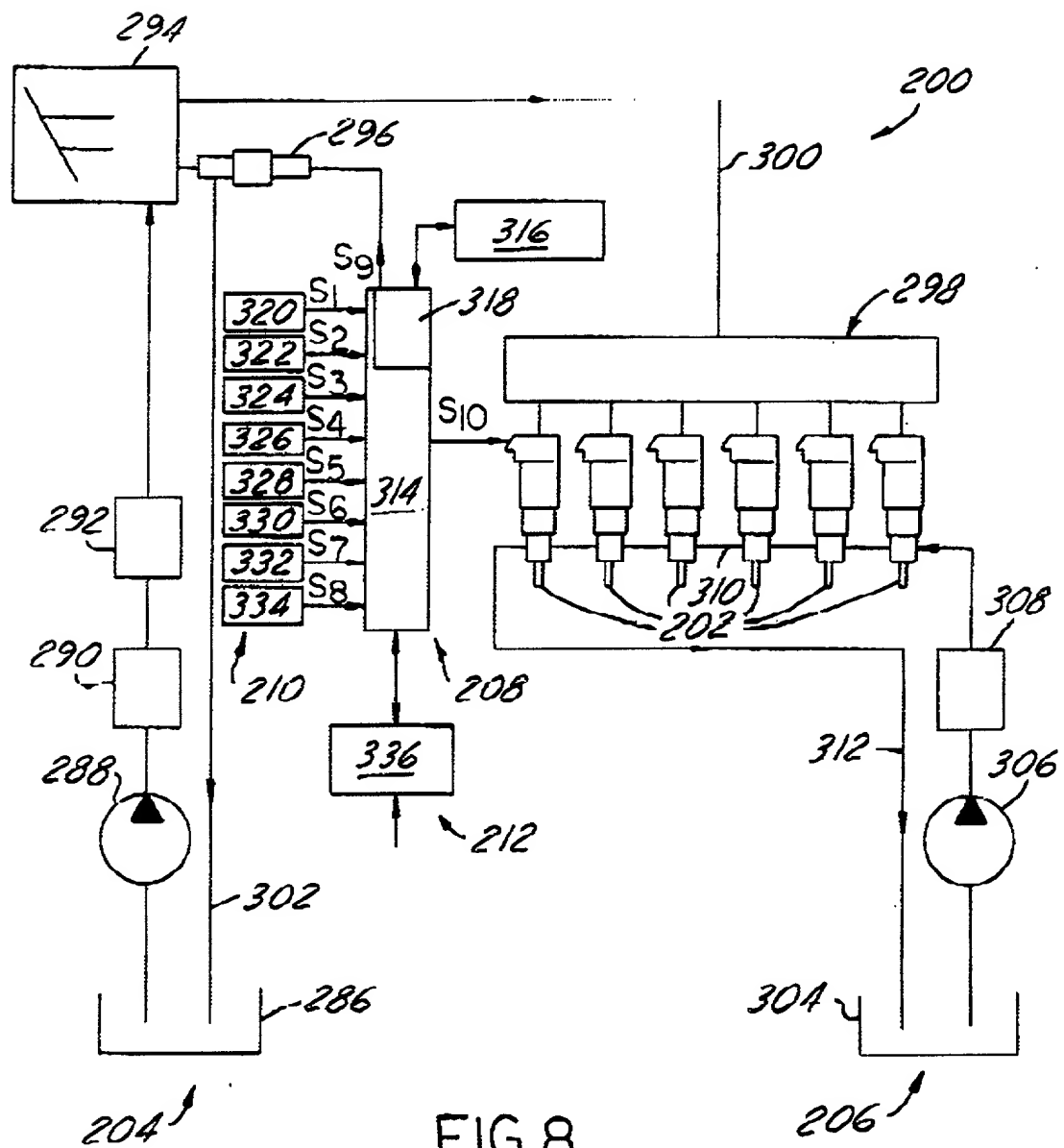
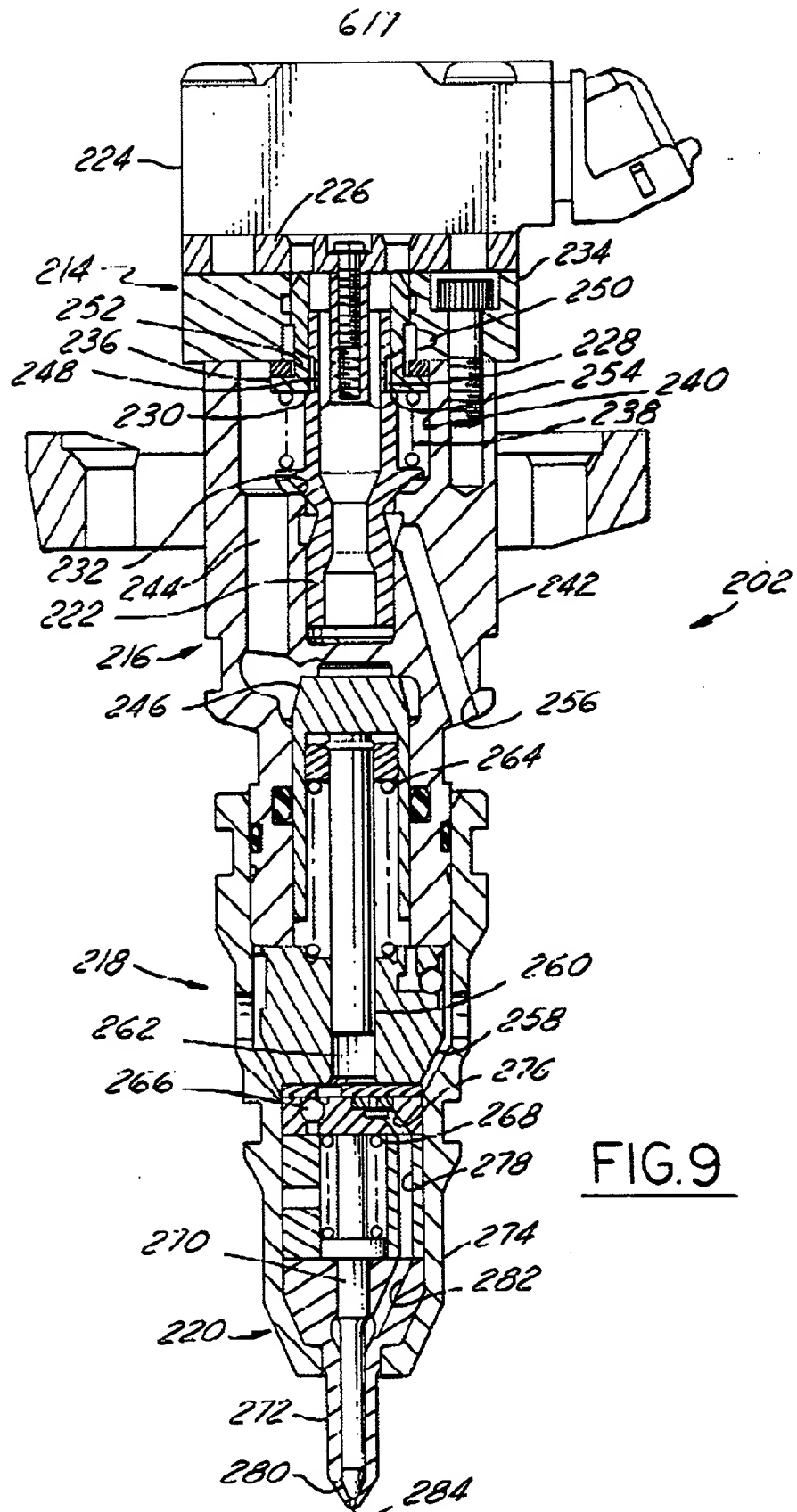


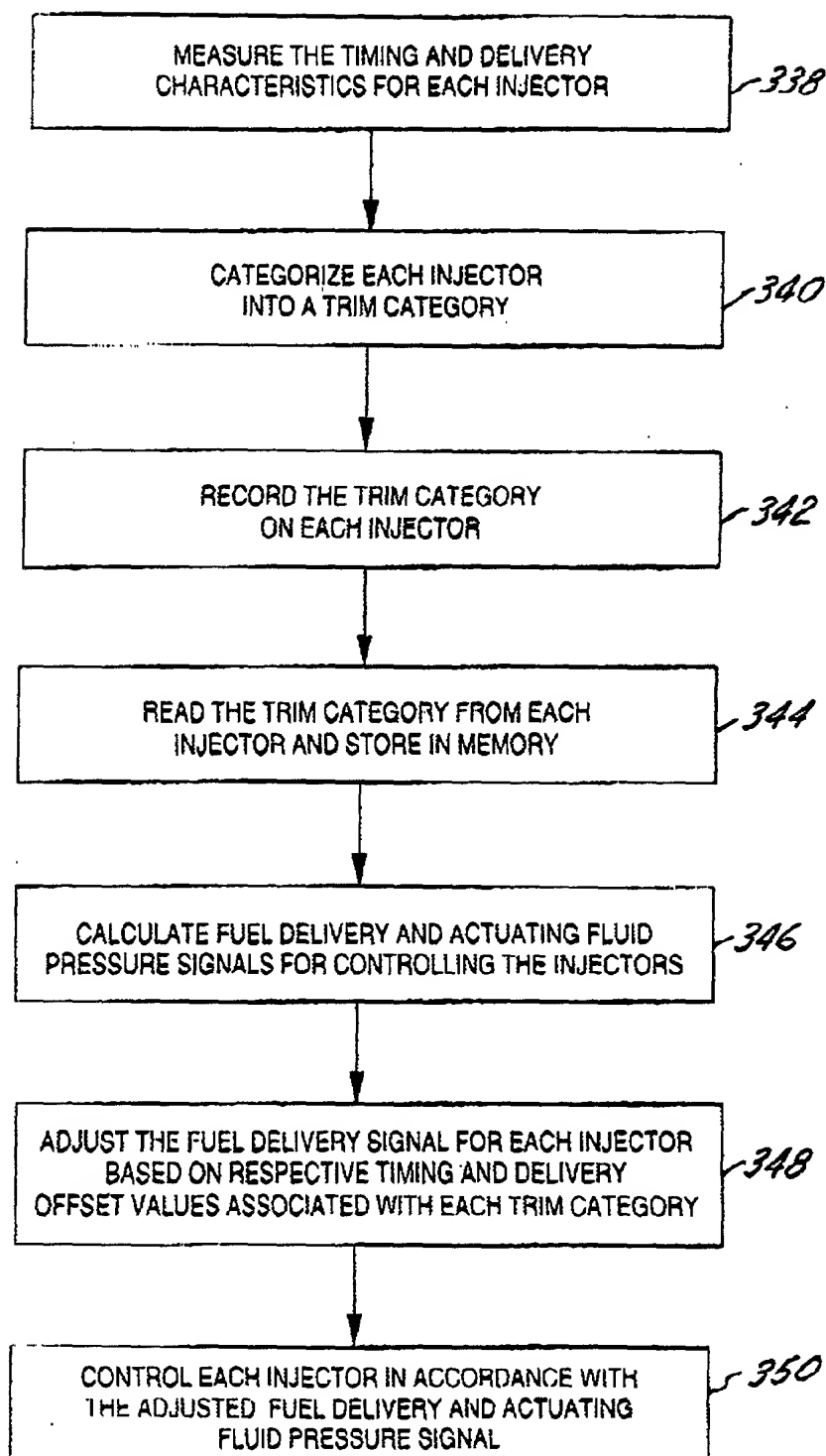
FIG. 7

517





7/7

FIG.10

## PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of )  
Shinogle, Ronald D. ) Art Unit: 3747  
Application No. 09/322,770 ) Examiner: Not Assigned  
Filed: May 28, 1999 ) Paper No.  
For: Method And Structure For )  
Controlling An Apparatus. )  
Such As A Fuel Injector, )  
Using Electronic Trimming )  
Attorney Docket No. 87-146 )

Peoria, Illinois 61629-6490  
April 12, 2000

Assistant Commissioner for Patents  
Washington, D.C. 20231

Reissue Application Declaration By The Inventors

Sir:

## CERTIFICATE OF MAILING

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envelope addressed to: Assistant  
Commissioner for Patents,  
Washington, D.C. 20231

on April 12, 2000 (Date)

Larry G. Cain

Attorney or Agent

Signature

Date: April 12, 2000

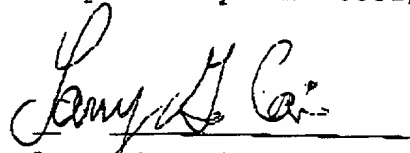
56250-022260



-2-

The last of the "DECLARATION AND POWER OF ATTORNEY" as received in this office today, March 28, 2000, the Yasser A. Charif DECLARATION AND POWER OF ATTORNEY and the DECLARATION AND POWER OF ATTORNEY for Richard A. DeKeyser, Vernon R. Smith and Stephen F. Glassey are being forwarded in response to the Notice Of Incomplete Reply dated, November 19, 1999. The applicants has enclosed the "Declaration And Power Of Attorney" for the inventors of record. The applicants have identified the original patent number and grant date for which a reissue patent is sought. The applicants have further clarified the reason a reissue patent has been sought, i.e. patentee claiming more or less than he had the right to claim in the patent.

Respectfully submitted,



Larry G. Cain

Registration No. 31, 150

Caterpillar Inc.

Telephone: (309) 675-4922

Facsimile: (309) 675-1236

#7-1462 Inventor Declaration.doc

663250-042260



PTO/SB/S1 (12-97)  
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**REISSUE APPLICATION DECLARATION BY THE INVENTOR**

Docket Number (Optional)

87-146R

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are stated below next to my name.

I believe I am ~~the original first and sole inventor~~ (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is described and claimed in patent number 5,634,448, granted June 3, 1997, and for which a reissue patent is sought on the invention entitled METHOD AND STRUCTURE FOR CONTROLLING AN APPARATUS, SUCH AS A FUEL INJECTOR, USING ELECTRONIC TRIMMING, the specification of which

☐ is attached hereto.

☒ was filed on May 28, 1999 as reissue application number 09 / 322,770 and was amended on \_\_\_\_\_ (if applicable)

I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)

- ☐ by reason of a defective specification or drawing.
- ☒ by reason of the patentee claiming more or less than he had the right to claim in the patent.
- ☐ by reason of other errors.

At least one error upon which reissue is based is described as follows:

Not claiming an apparatus as defined in new claim 32.

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 0.5 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



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## (REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

87-146R

All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant. As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Name(s)	Registration Number
Larry G. Cain	31,150
Joseph W. Keen	28,432
Robert J. Hampsch	36,155
Kevin M. Kercher	33,408
R. Carl Wilbur	36,056

Correspondence Address: Direct all communications about the application to:

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Code Label here

<input checked="" type="checkbox"/> Firm or Individual Name	Caterpillar Inc.				
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Address	100 NE Adams ST.				
City	Peoria	State	IL	ZIP	61629-6490
Country	USA				
Telephone	(309) 675-4922	Fax	(309) 675-1236		

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Full name of sole or first inventor (given name, family name)

Stephen F. Glassey

Inventor's signature

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Date

4/5/2000

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Full name of second joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

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Full name of third joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

☐ Additional joint inventors are named on separately numbered sheets attached hereto.



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## (REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

87-146R

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Full name of sole or first inventor (given name, family name)

Richard A. De Keyser

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Date

4-10-00

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Full name of second joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

Full name of third joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address



Additional joint inventors are named on separately numbered sheets attached hereto.



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## (REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

87-146R

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Robert J. Hampsch	36,155
Kevin M. Kercher	33,408
R. Carl Wilbur	36,056

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Full name of sole or first inventor (given name, family name)

Vernon R. Smith

Inventor's signature

Vernon R. Smith

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Date

4/6/00

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Full name of second joint inventor (given name, family name)

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Date

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Full name of third joint inventor (given name, family name)

Inventor's signature

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Residence

Citizenship

Post Office Address



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## (REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

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Joseph W. Keen	28,432
Robert J. Hampsch	36,153
Kevin M. Kercher	33,408
R. Carl Wilbur	36,056

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Full name of sole or first inventor (given name, family name)

Yasser A. Charif

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Yasser Charif

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Docket Number (Optional)

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Robert J. Hampsch	36,155
Kevin M. Kercher	33,408
R. Carl Wilbur	36,056

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Full name of sole or first inventor (given name, family name)

Renaud D. Shinogle

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*Renaud D. Shinogle*

Residence

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Inventor's signature

Date

Residence

Citizenship

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Full name of third joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

☐ Additional joint inventors are named on separately numbered sheets attached hereto.



#4

## PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application for Reissue )  
Of U.S. Patent No. 5,634,448 )  
RONALD D. SHINOGLA, ET AL ) Art Unit: Unassigned  
Application No. 09/322,770 ) Examiner: Unassigned  
Issued: June 3, 1997 ) Paper No. 10  
For: METHOD AND STRUCTURE )  
FOR CONTROLLING AN )  
APPARATUS, SUCH AS A )  
FUEL INJECTOR, USING )  
ELECTRONIC TRIMMING )  
Attorney Docket No. 87-146 R )

Peoria, Illinois 61629-6490

October 28, 1999

Honorable Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

ASSOCIATE POWER OF ATTORNEY

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D.C. 20231

On October 28, 1999 (Date)

Eric M. Bram

Attorney or Agent

Signature

Date: October 28, 1999



The undersigned hereby appoints Larry G. Cain, Patent Office Reg. No. 31,150 telephone (309) 675-4922, Alan J. Hickman, Patent Office Reg. No. 29,649, telephone (309) 675-4517, and John J. Cheeks, Patent Office Reg. No. 39,628, telephone (309) 675-4280 as an attorney or agent, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected with this application. Please address all correspondence to Larry G. Cain, Caterpillar Inc., Patent Department, AB6490 100 N. E. Adams Street, Peoria, Illinois 61629-6490.

Respectfully submitted,



Eric M. Bram  
Registration No. 37,285  
Caterpillar Inc.

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87-146R-associate power